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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Farrington et al.

SERIAL NO.: 07/815,783

GROUP ART UNIT NO.: 1109

DATE FILED: 01/02/92

EXAMINER: S. Chaudhry

INVENTION: "TUMBLING METHOD OF WASHING FABRIC  
IN A HORIZONTAL AXIS WASHER"

Honorable Commissioner of Patents and Trademarks  
Washington, D.C. 20231

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RESPONSE TO FIRST OFFICE ACTION

SIR:

In response to the outstanding Office Action of April 15, 1992, Applicant's Attorney respectfully requests the Examiner to reconsider and withdraw the rejection of claims 1-19, all of the claims pending in the above identified U.S. Letters Patent Application, as being obvious over the combination of Johnston and Brenner, both of record.

The present invention is directed to a novel method of washing clothes in a horizontal axis washer wherein a concentrated detergent wash solution is sprayed onto tumbling clothes, this solution is then diluted, and then the diluted solution is sprayed onto tumbling clothes.

In rejecting these claims, the Examiner has cited two references, Johnston and Brenner, which teach multiple step wash processes involving a first concentrated detergent step and a subsequent diluted wash liquor step. However, these references teach wash processes which are radically different from each other and from the present invention.

Johnston teaches use of a horizontal axis washer, tumbling clothes and repeatedly dropping them into a pool of concentrated detergent solution, diluting the concentrated detergent solution by adding additional water and subsequently tumbling the clothes through this diluted wash liquor. Johnston nowhere suggests the spraying of the detergent solution onto the clothes, in either the concentrated wash or the dilute wash step, let alone in both, as claimed in all of the claims of the present invention.

Brenner teaches use of vertical axis washer, spinning clothes while spraying the concentrated wash liquor at and through the clothes, and agitating the clothes in a pool of diluted wash liquor. Brenner nowhere teaches or suggests that this process is applicable to a horizontal axis washer. Brenner nowhere teaches or suggests spraying concentrated wash onto tumbling clothes, as required by each of the claims pending in the present invention. Brenner nowhere teaches or suggests spraying diluted wash liquor into tumbling clothes, as is also required by each of the claims.

Thus, neither of the references, either taken alone or in any combination, suggests either of the spraying steps of the present application, let alone the combination of these two spraying steps.

In fact, Applicant's Attorney respectfully submits that these references teach such radically different processes from each other that one of ordinary skill in the art would not have found it obvious to combine them in any way, let alone in the manner suggested by the Examiner. For example:

(1) In sharp contrast to Johnston's horizontal axis method, Brenner teaches use of vertical axis washer.

(2) Instead of tumbling clothes through and into a pool of concentrated detergent wash liquor, as taught by Johnston, Brenner teaches, spinning clothes while spraying the concentrated wash liquor at and through the clothes. In fact, Brenner explicitly teaches against the presence of a pool of water (see second sentence of Abstract, for example). Furthermore, Brenner explicitly teaches against a tumbling of clothes during the first washing step (see col 5 line 66 et. seq., for example), since the goal in Brenner is to pass a large amount of fluid through the clothes, rather than pass the clothes through the fluid.

(3) Finally, Brenner teaches agitating the clothes in a pool of diluted wash liquor, as required by Johnston. In fact, the clothes in Brenner would remain completely submerged in the wash liquor during the dilute washing step, since the basket would be filled "as is done in a normal wash cycle" (col. 6, line 58 et. seq.).

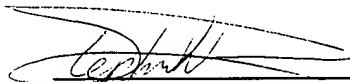
One of ordinary skill in the art, having before him or her these references would not know where to begin to combine them, since there is no teaching in either as to the manner in which they should or could be combined. For example, should the axis be horizontal or vertical? Should the concentrated wash step involve tumble or spin? Should the concentrated wash be sprayed or pooled?

Furthermore, even when so combined, these references teach away from the dilute tumble spray step provided in all of the claims of the present invention, since these references provide a choice only between agitating the clothes submerged in wash liquor or tumbling the clothes through and dropping them into a pool of wash liquor.

Applicant's Attorney has reviewed all of the other references of record. The claims are allowable over these references as well.

For the reasons presented above, the Examiner is therefore respectfully requested to withdraw this rejection. It is believed that the present application is in condition for allowance, and passing of the present application to issue are respectfully solicited.

Respectfully submitted,

  
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Stephen D. Krefman  
Reg. No. 28,631

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WHIRLPOOL CORPORATION  
2000 M-63  
Benton Harbor, Michigan 49022  
Telephone: 616-923-5013